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ABSTRACT

Compared to the United States labor force as a whole, blacks are overrepresented in social service careers and underrepresented in technical and executive careers. This study examined the possibility that the psychosocial environment provided by black colleges may help to cause or perpetuate the distribution of blacks among careers. The faculties of predominantly black colleges and of a representative sample of United States postsecondary institutions were classified in terms of six types: realistic, investigative, artistic, social, enterprising, and conventional. Compared to the representative sample of United States colleges, black colleges were found to be relatively more concentrated in social fields and relatively less concentrated in realistic and enterprising fields. Thus the distribution of faculty members among disciplines resembles the distribution of blacks among careers. The faculties of black institutions are also less concentrated in artistic or liberal arts fields. (Author/APM)

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Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through four programs to achieve its objectives. The Studies in School Desegregation program applies the basic theories of social organization of schools to study the internal conditions of desegregated schools, the feasibility of alternative desegregation policies, and the interrelation of school desegregation with other equity issues such as housing and job desegregation. The School Organization program is currently concerned with authority-control structures, task structures, reward systems, and peer group processes in schools. It has produced a large-scale study of the effects of open schools, has developed Student Team Learning Instructional processes for teaching various subjects in elementary and secondary schools, and has produced a computerized system for school-wide attendance monitoring. The School Process and Career Development program is studying transitions from high school to post secondary institutions and the role of schooling in the development of career plans and the actualization of labor market outcomes. The Studies in Delinquency and School Environments program is examining the interaction of school environments, school experiences, and individual characteristics in relation to in-school and later-life delinquency.

This report, prepared by the Studies in School Desegregation program, compares the environments of predominantly black colleges to the environments of a representative sample of colleges in general, using Holland's classification.

Abstract

Compared to the U.S. labor force as a whole, blacks are overrepresented in social service careers and underrepresented in technical and executive careers. This study examined the possibility that the environments provided by black colleges may help cause or perpetuate the distribution of blacks among careers. The faculties of predominantly black colleges and of a representative sample of U.S. postsecondary institutions were classified in terms of Holland's six types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Compared to U.S. colleges as a whole, the faculties of black colleges are relatively more concentrated in Social fields and relatively less concentrated in Realistic and Enterprising fields. Thus the distribution of faculty members among disciplines in black institutions resembles the distribution of blacks among careers. The faculties of black institutions are also relatively less concentrated in Artistic fields, or, in other words, in the traditional liberal arts.

Psychosocial Environments of Black Colleges:

A Theory-Based Assessment

Considerable concern has been expressed about the relatively small number of blacks and other minority groups who pursue high level careers. Economists and sociologists (Ashen, Felter & Rees, 1973; Hodge & Hodge, 1965; Treiman & Terrell, 1975) have pointed to an inverse relationship between the status level of various occupations and the number of blacks and women in those occupations. In addition, psychologically-oriented investigations (Gottfredson, 1978a, 1978b) have shown that blacks and women are underrepresented in technical and executives types of occupations and are overrepresented in social service types of occupations.

Concern also exists about the proper role of traditionally and predominently black colleges and universities (for example, Morris, 1979; National Advisory Committee on Black Higher Education and Black Colleges and Universities, 1979). Traditionally black colleges have produced the majority of black college graduates and appear still to be the most important means of access to a four-year college education for blacks. On the other hand, the distribution of students among majors in traditionally black institutions is generally consistent with the relative representation of blacks in different types of work (Morris, 1979), and the majority of predominantly but not traditionally black institutions are two-year colleges, which rarely offer training leading directly to high level careers.

Taken together, these concerns raise the question of whether black colleges have characteristics which may have contributed to the past distribution of blacks among occupations, and which may perpetuate that distribution in the future. This paper examines this question by comparing the psychosocial environments of black colleges and universities with the environments of U.S. colleges and universities in general, using measures based on a theory that integrates occupational choices and environmental influences (Holland, 1966a, 1973). Separate comparisons were made for traditionally black and for all predominantly black institutions.

Method

The procedure for this study uses Holland's (1966a, 1973) theory of careers, which holds that occupations can be classified in terms of six personality types or personal orientations--Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Typical workers in the Realistic category would be civil and mechanical engineers; in Investigative, chemists and physicians; in Artistic, writers and musicians; in Social, school teachers and ministers; in Enterprising, business executives and lawyers, and in Conventional, accountants and clerical workers. Applying this classification, Gottfredson (1978) confirmed that blacks are overrepresented in Social (i.e., social services) fields, especially among college graduates, and underrepresented in Enterprising (i.e., executive) and high-level Realistic (i.e., technical) fields. Black college graduates also are underrepresented in Investigative (i.e., scientific) fields (Gottfredson, 1978b).

More specifically, the procedure for the present study grows out of Holland's notion that an environment can be known from a census of the people inhabiting it. To test this notion, Astin and Holland (1961) developed the Environmental Assessment Technique (or EAT), which described the college environment in terms of eight characteristics of the student body: the number of students, the average intelligence (i.e., admission test score) of students, and the proportion of graduates who majored in fields falling into each of Holland's six types. These measures were moderately correlated with several different student report measures of the college environment (Pace, 1963; Pace & Stern, 1958) and of the outcomes of their college experience (Astin, 1961). However, EAT has been criticized (for example, Yonge, 1965) on the grounds that measuring both college environments and educational outcomes in terms of student characteristics confounds the independent and dependent variables for studies of college impact.

An obvious way to overcome this criticism would be to measure college environments in terms of faculty characteristics. Accordingly, Richards, Seligman, and Jones (1970) used a (modified) census of faculty types to assess the environments of 100 four-year colleges and universities in the United States. Results indicated that the faculty type scores had moderate to high reliability over a 20-year interval, were highly correlated with EAT scores based on students, and were moderately correlated with measures of the college environment based both on student reports (Pace, 1963) and on factor analysis of compendium data (Astin, 1962, 1965). Subsequent studies using faculty type scores yielded promising results for two-year colleges in the United States (Richards, Bulkeley

& Richards, 1972), for Japanese colleges and universities (Richards, 1973, 1975), and for British Commonwealth universities (Richards, 1974, 1975).

The present study used a census of faculty types to compare the environments of traditionally and predominantly black colleges and universities with the environments of a representative sample of U.S. post-secondary institutions. The population of black colleges and universities consisted of 141 separate institutions (101 traditionally black and 40 predominantly black) identified by Turner and Michael (1978) and by Morris (1979). (A few traditionally black institutions were excluded from this group because their student bodies were no longer predominantly black.) The representative sample consisted of 250 institutions chosen randomly from those listed in the National Center for Education Statistics (1978) Directory. Nine institutions appear in both groups.

The catalogs of these institutions provided the basic source of faculty data. Catalogs were obtained for 103 of the black institutions (80 of the traditionally black institutions, 23 of the predominantly black) and 204 of the representative sample institutions by mail requests and library searches. The faculties of these institutions were classified into the six Holland types using published lists of occupations (or disciplines) by types (Gottfredson & Brown, 1978; Holland, 1966b, 1979).

Eight measures of the college's psychosocial environment were derived to correspond closely to the eight student EAT measures. The total number of faculty members was used instead of the total number of students as a measure of institutional Size. To reduce skewness a square root transformation was applied to these numbers. The overall faculty-student ratio (i.e., the number of faculty members per 100 students) replaced

average student intelligence as a measure of institutional Affluence or Selectivity. In both cases, the substitution of the faculty measure for the student measures is consistent with the results of factor analytic studies of college environments (Astin, 1962, 1965; Richards, Rand & Rand, 1966). Finally, the percent of the total faculty in each of the six Holland types was used instead of the percent of graduates to measure relative environmental emphasis on these six personal orientations.

Results

The traditionally black, predominantly black, and representative sample institutions were classified in terms of the highest degree offered, and the percentages of institutions in each category with environmental (i.e., catalog) data were computed. These results, summarized in Table 1, show that a much higher proportion of traditionally black in-

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Insert Table 1 About Here

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stitutions (52.5%) than of representative sample institutions (28.4%) are solely four-year undergraduate colleges. Second, a high proportion (70%) of predominantly, but not traditionally, black institutions are two-year colleges. These observations confirm the conclusions of previous investigators (Morris, 1979). Third, and most important, the missing data rates differ by highest degree offered and are high enough in some categories to raise doubts about the validity of the environmental comparisons. Accordingly, the data shown in Table 1 were used to compute weighted estimates of what the environmental results would have been if catalog data had been available for all institutions.

Table 2 summarizes the comparison of the environments of black and

representative sample institutions. Results are shown separately for

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Insert Table 2 About Here

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traditionally black and all predominantly black institutions. Separate analyses also are shown for institutions with environmental data and for the weighted estimates of results for all institutions. The statistical tests of the significance of these differences assume that the black institutions are a population while the representative institutions are a sample. Therefore, these tests compare the representative sample means with the black means taken as population values. In other words, only the variabilities of the representative sample were used in these tests, and the degrees of freedom were based only on the representative sample N's. The six type scores are ipsative, so the statistical tests involving them are not independent.

These results and statistical tests indicate that, compared to representative sample institutions, a larger proportion of the faculties of the black colleges and universities were concentrated in Social fields and a smaller proportion in Realistic, Artistic, and Enterprising fields. No differences were obtained for Investigative fields, despite the fact that black college graduates are underrepresented in Investigative occupations (Gottfredson, 1978b). Results for Conventional fields were equivocal and strongly influenced by the adjustment for missing data. Although both faculty sizes and faculty-student ratios were higher in the representative sample institutions, these differences were not statistically significant. In short, the differences in the distributions of black and representative sample faculties among disciplines resembled, in part, the differences in the distribution of

black and white people among occupations (Gottfredson, 1978a, 1978b).

Discussion

The evidence that the psychosocial environments of black colleges and universities differ from the environments of U.S. postsecondary institutions in general does not of itself demonstrate that the environmental press of black colleges has played an important role in causing the distribution of blacks among occupations. For example, the extent to which the curricula of black colleges were designed to meet the occupational aspirations of students (thereby reversing the causal relationship) is unknown. Nevertheless, the results do indicate that instruction which would prepare students for technical and executive careers is relatively less available at black institutions while instruction which would prepare them for social service fields is relatively more available. Moreover, Holland's theory (1966a, 1973) implies, and the research of Astin and Panos (1969) indicates, that the occupational choices of students in a given college tend to change in ways that make those choices more consistent with the psychosocial environment of that college. Therefore, the results of this study suggest that the environments of black colleges may have been one of the important influences on past black occupational choices. More importantly, they suggest that in the absence of some intervention the environmental presses of black colleges and universities may perpetuate the current occupational distribution of black college graduates.

Consequently, this study has important implications for how efforts to strengthen black institutions should proceed. Efforts to alter black institutions might emphasize (high level) Realistic and Enterprising fields over Social fields in the design of career relevant majors. At the same time, instruction in Artistic fields, or, in other words, the traditional

liberal arts, also appears to be less available at black institutions. Efforts to strengthen black institutions should emphasize such fields, too, but more in order to further the intellectual growth of students than to change their occupational choices. Employment opportunities in Artistic fields are rare for both blacks and whites (Gottfredson, Holland & Gottfredson, 1975).

Cooperative programs between predominantly black and other postsecondary institutions also might emphasize Realistic and Enterprising fields. The allocation of students among colleges is problematical, however, because the retention rate for black students is higher at predominantly black than at other colleges and universities (Thomas, 1980). Taken at face value, however, these results imply that a black high school student planning to become a mechanical engineer, business executive, or lawyer currently is more likely to find an appropriate environment at an integrated college and might be so counseled. Although such a strategy somewhat contradicts the above suggestions for improving black institutions, for the present it might provide a fairly reasonable balance between the objectives of integrating previously all white institutions and of preserving traditionally and other predominantly black institutions. At the same time, black students aspiring or attracted to such fields are likely to be the best students in terms of traditional academic criteria (Richards, Williams & Holland, 1978). Therefore, diverting such students to integrated institutions might involve a significant loss in the quality of the student bodies at predominantly black institutions. Such a loss might be necessary in order to provide most students with an appropriate

educational environment and to produce some fairly prompt "improvement" in the distribution of black people among types of work, but if this is the case the decision to incur such a loss should be made consciously and explicitly.

Finally, the results of this study provide further evidence for the integrative power and general usefulness of Holland's theory. Other classifications exist, both for college faculties (Biglan, 1973; Smart & Elton, 1975) and for occupations (U.S. Bureau of the Census, 1971), and these classifications also could have been used to demonstrate that the distribution of the faculties of black institutions among disciplines and the distribution of black people among kinds of work are different from the distributions for the U.S. as a whole. Unlike Holland's theory, however, these classifications do not deal with the characteristics of the labor force, the characteristics of colleges and universities, and the characteristics of individual persons in a common framework; nor do they yield the kind of prediction about the consequences for particular kinds of students of attending particular kinds of colleges that can be derived from Holland's theory. For such purposes, no real alternative to the Holland classification currently exists.

References

Ashenfelter, O. & Rees, A. (Eds.). Discrimination in labor markets. Princeton, N.J.: Princeton University Press, 1973.

Astin, A. W. An empirical characterization of higher educational institutions. Journal of Educational Psychology, 1962, 53, 224-235.

Astin, W. W. Further validation of the Environment Assessment Technique. Journal of Educational Psychology, 1963, 54, 217-226.

Astin, A. W. Who goes where to college. Chicago, IL: Science Research Associates, 1965.

Astin, A. W. & Holland, J. L. The Environmental Assessment Technique: A way to measure college environments. Journal of Educational Psychology, 1961, 52, 308-316.

Astin, W. W. & Panos, R. J. The educational and vocational development of American college students. Washington, D.C.: American Council on Education, 1969.

Biglan, A. The characteristics of subject matter in different academic areas. Journal of Applied Psychology, 1973, 57, 195-203.

Gottfredson, G. D.; Holland, J. L.; & Gottfredson, L.S. The relation of vocational aspirations and assessments to employment reality. Journal of Vocational Behavior, 1975, 7, 135-148.

Gottfredson, L.S. An analytical description of employment according to race, sex, prestige, and Holland type of work. Journal of Vocational Behavior, 1978, 13, 210-221. (a)

Gottfredson, L.S. Providing black youth more access to Enterprising work. Vocational Guidance Quarterly, 1978, 27, 114-123. (b)

Gottfredson, L.S. & Brown, V.C. Holland codes for the 1969 and 1970 censuses: Detailed occupational titles. JSAS Catalog of Selected Documents in Psychology, 1978, 22, 8.

Hodge, R. W. & Hodge, P. Occupational assimilation as a competitive process. American Journal of Sociology, 1965, 71, 249-264.

Holland, J. L. The psychology of vocational choice: A theory of personality types and model environments. Waltham, Mass.: Blaisdell, 1966. (a)

Holland, J.L. A psychological classification scheme for vocations and major fields. Journal of Counseling Psychology, 1966, 13, 278-288. (b)

Holland, J.L. Making vocational choices: A theory of careers. Englewood Cliffs, N.J.: Prentice-Hall, 1973.

Holland, J.L. Professional manual for the Self-Directed Search. Palo Alto, Calif.: Consulting Psychologists Press, 1979.

Morris, L. Elusive equality: The status of black Americans in higher education. Washington, D.C.: Howard University Press, 1979.

National Advisory Committee on Black Higher Education and Black Colleges and Universities. Access of black Americans to higher education: How open is the open door? Washington, D.C.: Author, 1979.

National Center for Education Statistics. Education directory, colleges and universities 1977-78. Washington, D.C.: U.S. Government Printing Office, 1978.

Pace, C.R. Preliminary technical manual: College and university environmental scales. Princeton, N.J.: Educational Testing Service, 1963.

Pace, C.R. & Stern, G.G. An approach to the measurement of psychological characteristics of college environments. Journal of Educational Psychology, 1958, 49, 269-277.

Richards, J M. Jr. A study of the "environments" of Japanese universities. Research in Higher Education, 1973, 1, 87-99.

Richards, J.M., Jr. "Environments" of British Commonwealth universities. Journal of Educational Psychology, 1974, 35, 1135-1142.

Richards, J.M., Jr. Characteristics of U.S., Japanese, and British Commonwealth universities offering education in agriculture. Research in Higher Education, 1975, 3, 99-109.

Richards, J.M., Jr.; Bulkeley, E.M.; & Richards, B.M. Faculty and curriculum as measures of two-year college environment. Journal of College Student Personnel, 1972, 13, 433-440.

Richards, J.M., Jr.; Rand, L.M.; & Rand, L.P. A description of junior colleges. Journal of Educational Psychology, 1966, 57, 207-214.

Richards, J.M., Jr.; Seligman, R.; & Jones, P.K. Faculty and curriculum as measures of college environment. Journal of Educational Psychology, 1970, 61, 324-332.

Richards, J.M., Jr.; Williams, G.D.; & Holland, J.L. An evaluation of the 1977 Minority Introduction to Engineering summer program. (Research Report No. 270). Baltimore, MD: Center for Social Organization of Schools, The Johns Hopkins University, 1978.

Smart, J.C. & Elton, C.F. Goal orientations of academic departments: A test of Biglan's model. Journal of Applied Psychology, 1975, 60, 580-586.

Thomas, G.E. Equality of representation of race and sex groups in higher education: Institutional and program enrollment statistics. (Research Report No. 263). Baltimore, MD: Center for Social Organization of Schools, The Johns Hopkins University, 1978.

Thomas, G.E. The impact of college composition on the four-year college graduation of black students. (Research Report, Forthcoming.) Baltimore, MD: Center for Social Organization of Schools, The Johns Hopkins University, 1980.

Treiman, D.J. & Terrell, K. Sex and the process of status attainment: A comparison of working women and men. American Sociological Review, 1975, 40, 174-200.

Turner, W.H. & Michael, J.A. Traditionally black institutions of higher education: Their identification and selected characteristics. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Bureau of the Census. 1970 census of population: Classified index of industries and occupations. Washington, D.C.: U.S. Government Printing Office, 1971.

Yonge, G.D. Students. Review of Educational Research, 1965, 34, 253-263.

Table 1

Percent of Black and Representative Sample Institutions With Environmental Data by Highest Degree Offered

Highest Degree Offered	Traditionally Black Institutions		Predominantly But Not Traditionally Black Institutions		Representative Sample of U.S. Postsecondary Institutions	
	N	% With Environmental Data	N	% With Environmental Data	N	% With Environmental Data
Associate, Other Two-Year	16	31.3	28	64.3	88	69.3
Bachelors	53	83.0	7	42.9	71	80.3
Masters, First Professional	27	96.3	5	40.0	50	94.0
Doctorate	5	100.0	0	--	41	95.1
Total	101	79.2	40	57.5	250	81.6

Table 2

Comparisons of the Environments of Black and Representative Sample Institutions

Results for Colleges with Environmental Data

Environmental Measure	Traditionally Black (Actual N=80) Mean	S.D.	All Predominantly Black (Actual N=103) Mean	S.D.	Representative Sample (Actual N=204) Mean	S.D.	"t" Test Comparing Representative Sample With: Traditionally Black	All Predominantly Black
Total Faculty Size	11.46	4.88	11.32	4.73	12.08	8.43	-1.05	-1.29
Faculty/Student Ratio	7.57	4.02	6.86	3.98	7.69	1.48	-0.23	-1.58
% of Faculty in Fields That Are:								
Realistic	4.01	5.86	4.45	7.26	5.31	7.77	-2.39**	-1.58
Investigative	22.51	9.25	21.29	9.1	21.44	16.55	0.92	-0.13
Artistic	26.02	7.31	25.56	7.95	29.34	16.89	-2.81**	-3.20**
Social	38.15	8.41	37.14	10.67	30.73	14.24	7.44**	6.43**
Enterprising	5.79	2.97	6.29	5.40	8.65	12.66	-3.23**	-2.66**
Conventional	3.51	2.39	5.27	7.12	4.54	6.47	-2.27*	1.61

Estimated Results for All Colleges

	Traditionally Black (Weighted N=101) Mean	S.D.	All Predmonantly Black (Weighted N=141) Mean	S.D.	Representative Sample (Weighted N=250) Mean	S.D.		
Total Faculty Size	10.74	4.88	10.78	4.75	11.68	8.09	-1.84	-1.76
Faculty/Student Ratio	7.55	3.89	6.67	3.95	7.42	7.21	0.29	-1.64
% of Faculty in Fields That Are:								
Realistic	4.34	7.01	4.63	8.16	5.72	6.67	-3.27**	-2.58**
Investigative	22.38	9.22	20.87	9.37	21.02	15.86	1.36	-0.15
Artistic	25.95	7.41	25.55	8.49	29.12	16.62	-3.02**	-3.40**
Social	37.35	8.68	36.48	12.18	30.68	13.96	7.55**	6.57**
Enterprising	5.86	3.19	6.37	5.85	8.55	12.17	-3.49**	-2.83**
Conventional	4.10	3.04	6.08	8.46	4.91	6.81	-1.88	2.72**

* p .05

** p .01